16. The method of claim **1**, further comprising the step of concentrating said FV vector particles, followed by dilution to about 140 mM to about 160 mM, preferably about 150 mM NaCl.

17. The method of claim **1** further comprising the step of concentrating said FV vector particles using tangential flow filtration.

18. The method of claim **1** further comprising the step of concentrating said FV vector particles using ultracentrifugation.

19. The method of claim **1** wherein said FV vector particles are stored at a temperature of about −70° C. to about −90° C., preferably about −80° C. in the presence of DMSO.

20. The method of claim **1** wherein said FV vector particles are stored frozen in the presence of from about 3 to about 5% DMSO, preferably about 5% DMSO.

21. A method of obtaining an increased titer of FV vector particles, comprising the steps of:

a. pre-seeding a population of eukaryotic cells for about 20 to about 30 hours, or about 24 hours, wherein said pre-seeding is carried out until said population of eukaryotic cells achieves a cell density of from about 1×10^5 cells/cm^2 to about 2×10^5 cells/cm^2 or about 1.8×10^5 cells/cm^2;

b. transfecting a population of eukaryotic cells by contacting said population of eukaryotic cells with one or more transfection reagents, wherein said one or more transfection reagents comprise vector and a plasmid comprising codon optimized pCiGAGopt, wherein said plasmid is used at a concentration of about 0.16 to about 10.4 microgram per 75 cm^2 culture surface equivalent, preferably 0.65 microgram per 75 cm^2 culture surface equivalent to form a transfection mixture, and incubating said transfection mixture to form a transfected cell population;

c. harvesting said FV vector particles from said transfected cell population, wherein said harvesting step is carried out about 70 hours to about 100 hours, or about 70 hours to about 90 hours, or about 70 hours to about 80 hours, or about 72 hours to about 75 hours, post-transfection;

d. purifying said FV vector particles, wherein said purification step comprises use of a media comprising heparin;

e. concentrating said FV vector particles;

f. diluting said FV vector particles to about 150 mM NaCl.

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